CLAIMS

1. A semiconductor component in which the active junctions extend along at least one cylinder perpendicular to main surfaces of a semiconductor chip substantially across an entire thickness thereof, said at least one cylinder having a cross-section with an undulated closed curve shape.

2. The semiconductor component of claim 1, wherein said undulated curve is a curve of Sierpinksi curve type.

3. The semiconductor component of claim 1, wherein the contacts with regions to be connected are taken by conductive fingers perpendicular to the main surfaces of the semiconductor chip and substantially crossing the entire region with which a contact is desired to be established.

4. The semiconductor component of claim 3, wherein the conductive fingers are metal fingers.

5. The semiconductor component of claim 1, wherein the semiconductor component is of multicellular type, and the junctions are formed of several cylinders perpendicular to the main substrate surfaces.

6. The semiconductor component of claim 3, wherein said at least one conductive finger solid with the most external semiconductor layer forms a cylinder or cylinder portions surrounding said most external semiconductor layer.

7. A diode according to claim 1, comprising a central conductive finger extending across the entire substrate thickness surrounded with a region of a first conductivity type and with a region of a second conductivity type, a contact being taken back at the periphery of the region of the second conductivity type by at least one peripheral conductive finger, the central conductive finger being connected to a first metallization extending over an entire substrate surface, and said at least one peripheral conductive finger being connected to a metallization on the other substrate surface.

8. The diode of claim 5, formed in an N-type semiconductor substrate, wherein the conductive fingers penetrating into the N-type regions are surrounded with heavily-doped N-type regions.

9. A bipolar transistor according to claim 1, alternately comprising a region of a first conductivity type, a region of a second conductivity type, and a region of the first conductivity type, each of these regions extending across the entire substrate thickness and being in contact by at least one conductive finger, each of the conductive fingers being respectively connected to an emitter metallization, to a base metallization, and to a collector metallization.

10. A thyristor according to claim 1, successively comprising a first region of a first conductivity type, a second region of the second conductivity type, a third region of the first conductivity type, and a fourth region of the second conductivity type, each of these regions extending across the entire substrate thickness, a conductive finger extending into the entire first region, at least one conductive finger extending into the entire second region, and at least one conductive finger extending into the entire fourth region.

11. The thyristor of claim 8, wherein the first conductivity type is type N, the second conductivity type is type P, the first region being a cathode region and the fourth region an anode region, and wherein localized metallizations extend vertically between the gate region and the cathode region to form localized gate-cathode short-circuits.